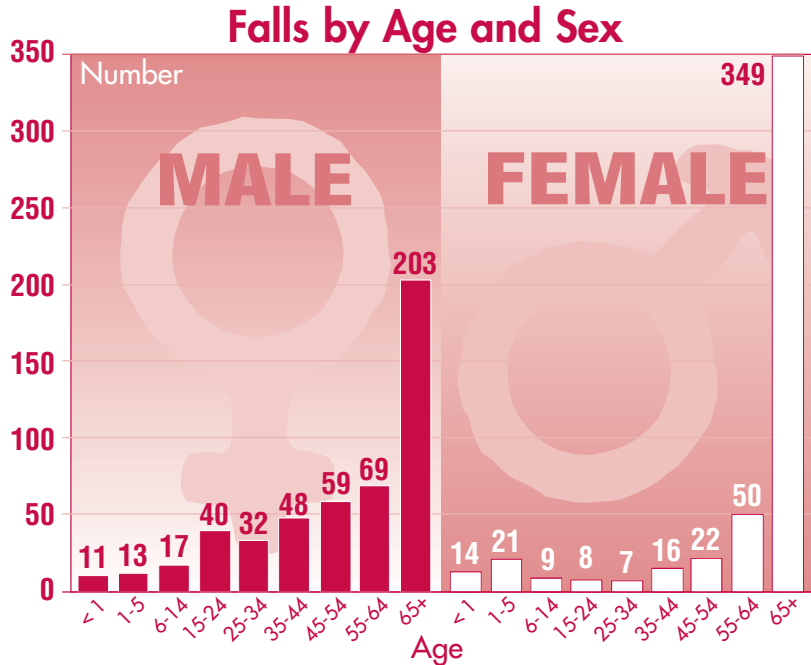
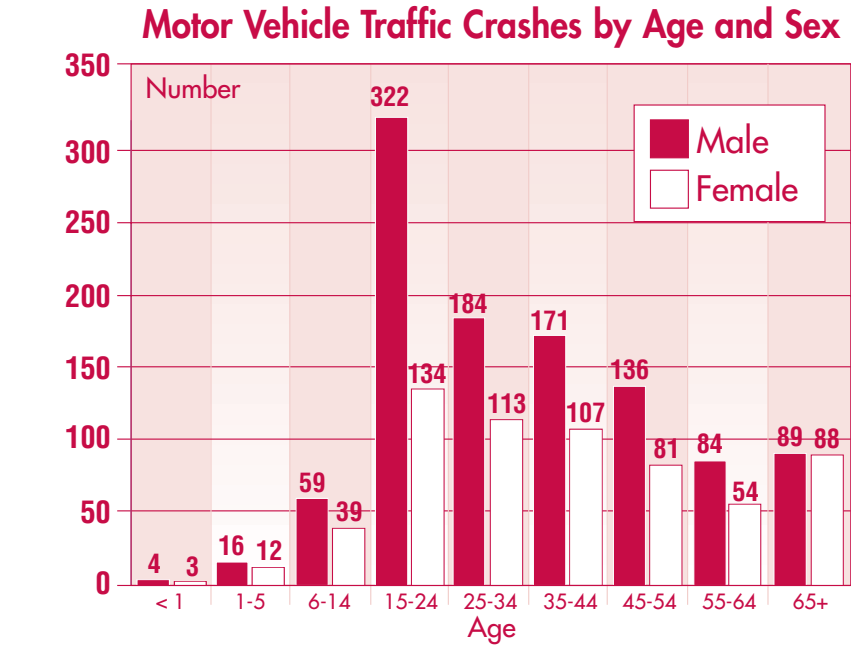


Of the total traumatic brain injuries due to falls, 55.9 percent were from the age group 65 years old and older. Of the 496 females who suffered a head injury due to a fall, 70.4 percent were 65 years old or older, compared to 41.3 percent of the 492 males. A greater number of females (35) under 6 years of age suffered a fall related head injury than males (24).

Approximately 4.7 percent of the accidental falls causing a head injury were work related.

Of the 1,065 males who were involved in a motor vehicle accident, 30.2 percent were ages 15 to 24 years compared to 17.3 percent in ages 25 to 34 years. These two age groups accounted for almost half of the total motor vehicle injuries. For both males (30.2 percent) and females (21.2 percent), there were more injuries in the 15 to 24 year age group than any other group.

Work-related accidents accounted for 0.9 percent of the total motor vehicle accidents. Of the total head injuries from motor vehicle traffic accidents, 7.3 percent resulted in a severe brain injury; 32.2 percent was classified as moderate; 47.5 percent was classified as mild; and the severity for 13.0 percent was undetermined.



When all cases were included, 28.5 percent of the individuals with severe brain injuries were hospitalized more than seven days, compared to 35.0 percent of the individuals with injuries considered to be moderate, and 15.5 percent for those with mild injuries. For cases where severity was undetermined, 17.7 percent were hospitalized more than seven days.

When individuals who died are excluded from the analysis, 92.9 percent of people with severe brain injuries were hospitalized more than seven days, while the percent of individuals with lesser injuries showed little change.

Of the cases with hospital stays of more than 7 days, 58.3 percent were considered moderate brain injuries.

The length of stay could be affected by other injuries that occurred during the accident. The severity index by itself should not be used as a predictor or indicator of length of stay.

Severity of Injury by Length of Stay										
Length of Stay	Total	Died	Severe		Moderate		Mild		Undetermined	
			Total	Died	Total	Died	Total	Died	Total	Died
Less than 24 hrs.	139	122	80	79	34	18	5	5	20	20
1 Day	637	72	50	50	148	20	338	1	101	1
2 Days	573	32	22	22	193	7	277	2	81	1
3 Days	416	19	10	10	168	4	188	3	50	2
4 Days	277	13	6	6	128	5	107	2	36	0
5 Days	211	11	5	3	103	8	78	0	25	0
6 Days	203	15	9	9	89	5	87	1	18	0
7 Days	123	4	1	0	60	3	50	0	12	1
8 to 14 Days	475	30	19	11	283	16	135	2	38	1
15 to 21 Days	178	10	17	2	108	7	36	1	17	0
22 to 28 Days	87	7	10	4	52	3	19	0	6	0
29 Days or more	112	10	27	4	54	2	18	3	13	1
TOTAL	3431	345	256	200	1420	98	1338	20	417	27

Tennessee Traumatic Brain Injury Newsletter was published by the Tennessee Department of Health, Health Statistics, Cordell Hull Building, Nashville, Tennessee 37247

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Tennessee Traumatic Brain Injury

2003 July - December

A traumatic brain injury is defined as an acquired injury to the brain caused by an external physical force that may result in total or partial disability or impairment.

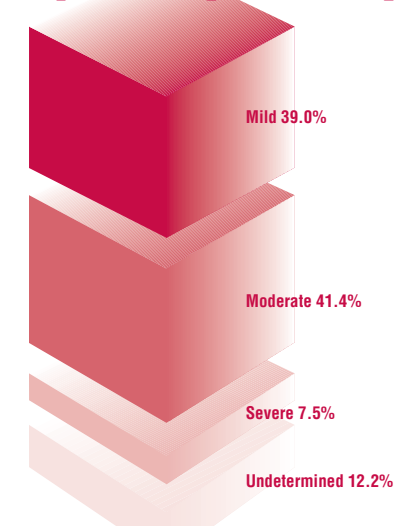
Tennessee Department of Health
Policy, Planning, and Assessment
Health Statistics
July - December 2003

Introduction

The enabling legislation establishing the traumatic brain injury registry was signed into law in May, 1993. As written, the initial legislation prohibited health care providers from reporting case information without written consent of the patient. An amendment was passed in May, 1996 resolving this issue. Data collection officially began with patients discharged during 1996. The hospitals report information on inpatients, with specific ICD-9 CM diagnosis codes, whose admission and discharge dates are different (where length of stay was 24 hours or more) and for those individuals who died. Patients seen in emergency rooms who were sent home the same day or length of stay was less than 24 hours are not included in the registry.

A traumatic brain injury is defined as an acquired injury to the brain caused by an external physical force that may result in total or partial disability or impairment.

Injuries by Severity



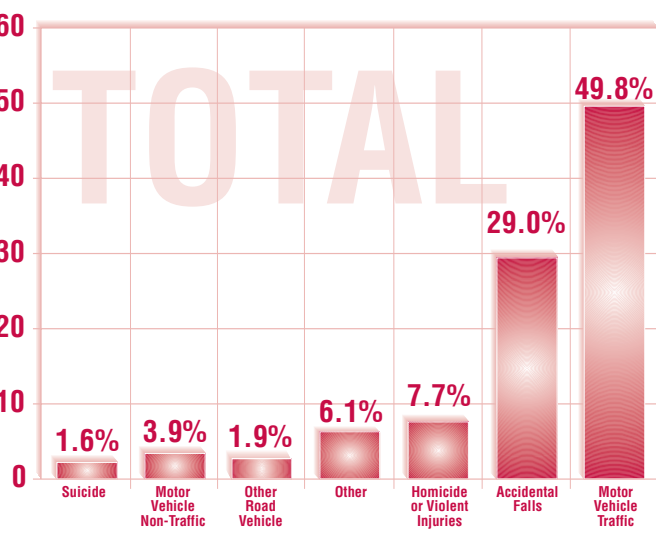
Approximately 78 percent of the patients with a severe traumatic brain injury died. This category represents 58.0 percent of the total patients that died.

For patients with a moderate brain injury (excluding deaths) 67.1 percent were discharged for home care requiring non-skilled or some degree of skilled assistance. Those discharged to residential facilities with or without skilled nursing services accounted for 11.7 percent and 15.5 percent were discharged to an inpatient rehabilitation facility.

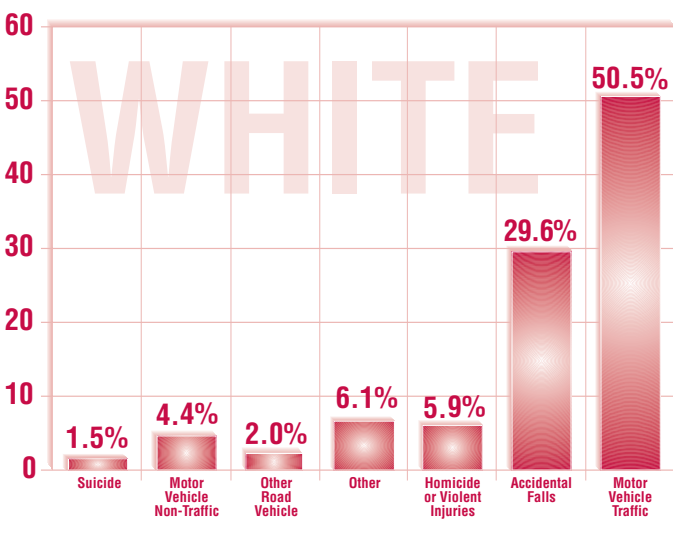
Excluding deaths, 84.4 percent of the patients with a mild brain injury were discharged to home care requiring non-skilled or some degree of skilled assistance.

Hospital Discharge Status by Severity of Injury					
Discharge Status	Total	Severe	Moderate	Mild	Undetermined
Transferred to acute care hospital	44	2	22	12	8
Home - self care	1,958	4	751	932	271
Home - requiring non-skilled assistance	182	1	64	111	6
Home - health services or outpatient rehab	164	1	72	69	22
Residential facility w/o skilled nursing	30	2	15	6	7
Residential facility with skilled nursing	242	13	140	64	25
Inpatient rehab facility	357	31	205	87	34
Patient died	345	200	98	20	27
Other	106	2	51	36	17
	3	0	2	1	0
Total	3,431	256	1,420	1,338	417

An external cause of injury permits the classification of environmental events, circumstances, and the conditions as the cause of injury. An external cause of injury was reported for 99.3% (3,406) of the 3,431 persons treated in Tennessee. The data presented by race represents 2,940 white and 305 black cases.



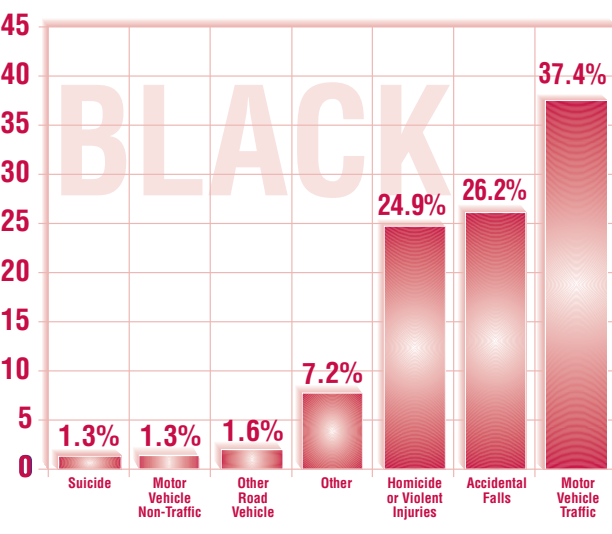
The leading cause of traumatic brain injuries, 49.8 percent (includes only cases with external cause of injury reported) was motor vehicle traffic accidents. Accidental falls accounted for 29.0 percent. Homicide or violent deaths which includes injury undetermined whether accidentally or purposely inflicted and legal intervention



accounted for 7.7 percent of the total injuries.

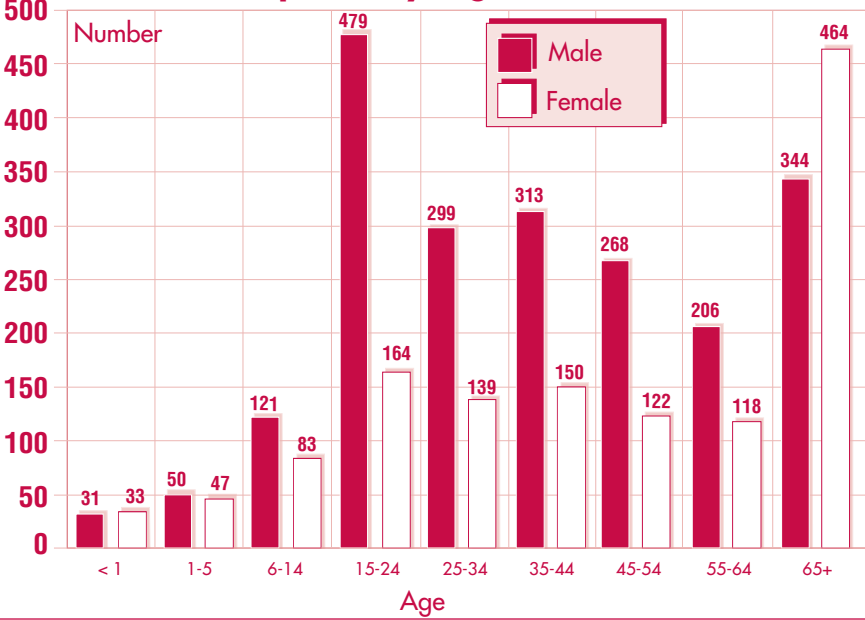
For whites, the leading cause of traumatic brain injury was motor vehicle traffic accidents with 50.5 percent. The second leading cause of injury was accidental falls with 29.6 percent. The third leading cause was other accidents at 6.1 percent.

The leading cause of head injury for blacks (37.4 percent) was motor vehicle traffic accidents. Accidental falls were the second leading cause of injury with 26.2 percent. The third leading cause of injury for blacks was homicide or violent injuries with 24.9 percent.



There were more accidents resulting in a head injury for males than females in all age groups except under 1 year of age and 65 years and older. This is primarily due to traffic accidents. At age 65 and older, females experience more injuries due to falls. Further analysis of the data revealed that 28.1 percent of the (64) patients less than one year of age suffered a brain injury due to homicide or an injury purposely inflicted by other persons.

Injuries by Age and Sex



Based on the ICD-9-CM diagnosis codes, 39.0 percent of all patients experienced a “mild” injury. The injuries considered “moderate” made up 41.4 percent while 7.5 percent were considered “severe”. Four hundred seventeen (417) cases, or 12.2 percent had an insufficient clinical description and the severity for these cases was undetermined.

The severity index is based on the clinical diagnosis of the injury.

Excluding the patients that died, 74.7 percent were discharged for home care requiring non-skilled or some degree of skilled assistance. This indicates a tremendous burden on the families and communities of the brain injured survivors.